# Electroluminescent Driver Circuit

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## Cross Reference to Related Cases

[0001] This application is a divisional application of U.S. Application Serial No. 10/051,865, USP. 6,693,387, entitled "Electroluminescent Driver Circuit," filed January 16, 2002.

## Technical Field

[0002] The present invention relates generally to electroluminescent driver circuits and in particular the present invention relates to an electroluminescent driver circuit with improved power consumption efficiency.

## Background

[0003] An electroluminescent lamp (EL-lamp) is a light source that is typically used for portable (battery operated) electronic devices. An EL-lamp is constructed similar to a capacitor in that it has a dielectric positioned between two electrodes. In an EL-lamp, one of the electrodes is transparent. Typically, a phosphor powder is used to radiate light when a strong electrical field is applied across it. The phosphor powder may be contained in the dielectric layer or it may be in a separate layer that is adjacent the dielectric layer. The EL-lamp is illuminated when an alternating current (AC) is applied across the electrodes. An integrated driver circuit (an EL driver) is typically used to convert direct current (DC) from the battery to a desired AC current. An example of a three port EL driver is described in US Patent No. 5,347,198 to Kimball which is incorporated herein by reference.

[0004] In a typical EL driver application, the EL driver will deliver a voltage to the lamp on the order of 160 to 240 volts peak to peak. The lamp frequency is typically 100 to 800 HZ. If EL-lamps are used as backlights for color displays, a white panel will be used that may require peak–to-peak voltage swings as high as 400V. In this